

Attorney Docket: 071469-0305806
Client Reference: PC0267A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED
CENTRAL FAX CENTER

AUG 07 2006

In re PATENT APPLICATION of:

FINK et al.

Confirmation Number: 3532

Application No.: 10/705,224

Group Art Unit: 1763

Filed: November 12, 2003

Examiner: MacARTHUR, Sylvia

Title: METHOD AND APPARATUS FOR IMPROVED BAFFLE PLATE

August 7, 2006

ATTACHMENT SHEETS TO PRE-APPEAL BRIEF CONFERENCE REQUEST

Mail Stop AF
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Appellants hereby request that a panel of examiners formally review the legal and factual basis of the rejections in the above-identified application prior to the filing of an appeal brief. Appellants assert that the outstanding rejections (now on appeal by virtue of the concurrently filed Notice of Appeal) are clearly improper based both upon errors in facts and the omission of essential elements required to establish a prima facie rejection (i.e., the prior art references fail to disclose, teach or suggest all the recited claim features).

APPEALED REJECTION

Appellants are appealing the rejection of claims 1, 3-5, 9-14, and 16 under 35 U.S.C. § 102(e) as being anticipated by Hiroiyuki (Japanese Patent No. 2002-252209), the rejection of claims 1, 6-8, and 14-16 under 35 U.S.C. § 102(b) as being anticipated by Tomoyasu et al. (U.S. Patent No. 6,264,788), the rejection of claims 1, 8, and 14-16 under 35 U.S.C. § 102(e) as being anticipated by Li et al. (U.S. Patent No. 6,506,685), the rejection of claims 1, 7-13, 16, and 17 under 35 U.S.C. § 102(e) as being anticipated by Ludviksson et al. (U.S. Patent Application Publication No. 2005/0041238), and the rejection of claim 2 under 35 U.S.C. §

FINK et al. – 10/705,224
Client-Matter: 071469-0305806

103(a) as being obvious over Hiroyuki or Tomoyasu et al. in view of Kanno et al. (U.S. Patent No. 6,646,233).

ARGUMENTS FOR TRAVERSAL

The appealed rejections are improper because the Examiner has not made a prima facie case of anticipation. The Applicant respectfully submits that none of the references relied upon describe or suggest all of the features as combined in the rejected claims. In addition, the appealed rejections are improper because the Examiner has not made a prima facie case of obviousness. Specifically, the references do not suggest the combination of features as recited by the claims.

As discussed in detail in the Amendment filed on June 7, 2006, with respect to claims 1-15, the cited prior art fails to describe or suggest a number of features including (1) a centering ring and (2) a baffle plate centered by removably coupling the baffle plate to a portion of the centering ring extending radially outside the periphery of the substrate holder. As explained in the remarks of the Amendment filed June 7, 2006, the rejections of claims 1-15 appear to be based on an erroneous interpretation that the references show a baffle plate coupled to a centering ring that extends radially outside of the periphery of the substrate holder. This is simply not the case.

Hiroyuki describes a baffle plate 12 that is fixed to an insulating ring 13 between an end face of the electrode protection member 8 and a side face of the electrostatic chuck 4. (Hiroyuki at paragraph [0018].) As illustrated by Hiroyuki, the baffle plate 12 abuts against the electrode protection member 8. The electrode protection member 8 appears to be a cup-shaped element that surrounds the lower electrode 2. The electrode protection member 8, therefore, is not a centering ring nor would those skilled in the art appreciate the electrode protection member 8 to be a centering ring.

Tomoyasu et al. describes a baffle plate 326 that is integral to a ring 325. (Tomoyasu et al. at col. 11, lines 12-13.) In other words, the baffle plate 326 and the ring 325 are parts of the same structure. Accordingly, there is no separate feature that may be identified as a centering ring.

Li et al. describes a perforated plasma confinement ring 222 disposed outside of the outer periphery of the bottom electrode 210 such that the perforated plasma confinement ring 222 abuts a focus ring 216, if the focus ring 216 is present. (Li et al. at col. 5, lines 25-28.)

FINK et al. – 10/705,224
Client-Matter: 071469-0305806

The focus ring 216 is not a centering ring. Moreover, the focus ring 216 does not extend radially outside the periphery of the substrate holder.

In Fig. 1, Ludvikkson et al. illustrates a baffle plate that extends inwardly from the shield 14. As such, the orientation of the baffle plate differs considerably from the claims because the baffle plate does not extend from the substrate holder 30 to the shield 14. There is no discussion of a centering ring. In fact, one would not be required since the baffle plate is not connected to the substrate holder 30.

As noted, each of the references fail to describe each and every feature of the invention recited by claims 1 and 3-15. Accordingly, the references do not support prima facie cases for anticipation. As a result, the references cannot be relied upon to anticipate claims 1 and 3-15.

With respect to the rejection of claim 2 under 35 U.S.C. § 103(a) as being obvious over Hiroiyuki or Tomoyasu et al. or Li et al. or Ludvikkson et al. in view of Kanno et al., the Applicant reiterates that each of the references are deficient for the reasons set forth above. Kanno et al. does not cure the deficiencies, because it describes a wafer stage for a wafer processing apparatus and a wafer processing method that excludes any baffle plate or centering ring. Without either a baffle plate or a centering ring, Kanno et al. cannot assist to render the claims obvious.

In addition, with respect to claim 16, the cited prior art fails to disclose or suggest a disposable baffle that includes a removable ring with (1) a first edge configured to be coupled removably to the substrate holder via a centering ring that extends radially outside a periphery of the substrate holder and (2) a second edge configured to be proximate a wall of the plasma processing system, wherein a space between the second edge and the wall of the processing system is substantially constant. As explained in the remarks of the Amendment filed June 7, 2006, similar to the rejection of claims 1-15, the rejection of claim 16 appears to be based on an erroneous interpretation that the references show a baffle plate with a first edge that may be coupled to a centering ring and a second edge proximate to the wall of the processing system. This is simply not the case.

As discussed above, Hiroiyuki describes no centering ring or any structure that may be considered to be a centering ring. The baffle plate 12 abuts against the electrode protection member 8. In Tomoyasu et al., the baffle plate 326 is not separate from the ring 325. (Tomoyasu et al. at col. 11, lines 12-13.) Li et al. describes a perforated plasma confinement ring 222 disposed outside of the outer periphery of the bottom electrode 210 abutting a focus

FINK et al. - 10/705,224
Client-Matter: 071469-0305806

ring 216, if present. (Li et al. at col. 5, lines 25-28.) The focus ring 216 is not a centering ring and does not extend radially outside a periphery of the substrate holder. Ludviksson et al. illustrates a baffle plate that extends inwardly toward the substrate holder 30 from the shield 14. There is no discussion of a centering ring. Since the references fail to describe each and every feature of the invention recited by claim 16, the references cannot anticipate claim 16.

Finally, with respect to claim 17, the Applicant respectfully submits that the references do not describe or suggest a method of replacing a baffle plate that includes removing a first baffle plate from the centering ring and installing a second baffle plate in the plasma processing system by coupling the second baffle plate to the centering ring, wherein the coupling facilitates auto-centering of the second baffle plate in the plasma processing system. Ludviksson, which is the only reference applied against claim 17, does not assist the Examiner with a rejection of claim 17 because, at a minimum, the baffle plate extends inwardly toward the substrate holder 30 from the shield 14. As a result, Ludviksson does not describe each and every feature recited by claim 17 and, therefore, cannot anticipate claim 17.

CONCLUSION

It is respectfully requested that the panel return a decision concurring with Applicant's position and eliminating the need to file an appeal brief because there are clear legal and/or factual deficiencies in the appealed rejections. Specifically, the subject matter recited in claims 1-17 is not anticipated or rendered obvious. Thus, all of pending claims 1-17 are allowable.

Respectfully submitted,

PILLSBURY WINTHROP
SHAW PITTMAN LLP

By: 

Jeffrey D. Karceski

Reg. No.: 35,914

Tel. No.: 202.663.8403

Fax No.: 202.663.8007

Date: August 7, 2006
P.O. Box 10500
McLean, VA 22102
(703) 770-7900